

ISSUANCE DATE: 06/01/2022



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name: KIA Georgia, Inc.
Facility Address: 7777 KIA Parkway
West Point, GA 31833, Troup County
Mailing Address: 7777 KIA Parkway
West Point, GA 31833
Parent/Holding Company: KIA Motors
Facility AIRS Number: 04-13-285-00084

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

Installation a second regenerative thermal oxidizer (RTO-2) and the replacement/addition of burners on three existing ovens

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Amendment and Permit No. 3711-285-0084-V-03-0. Unless modified or revoked, this Amendment expires upon issuance of the next Part 70 Permit for this source. This Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in App No. 642427 dated March 15, 2022; any other applications upon which this Amendment or Permit No. 3711-285-0084-V-03-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **15** pages.



Richard E. Dunn, Director
Environmental Protection Division

Table of Contents

PART 1.0 FACILITY DESCRIPTION1
1.3 Process Description of Modification.....1
PART 3.0 REQUIREMENTS FOR EMISSION UNITS2
3.1.1 Modified Emission Units.....2
3.2 Equipment Emission Caps and Operating Limits3
3.3 Equipment Federal Rule Standards4
PART 4.0 REQUIREMENTS FOR TESTING5
4.2 Specific Testing Requirements.....5
PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)6
5.2 Specific Monitoring Requirements6
PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS8
6.1 General Record Keeping and Reporting Requirements8
6.2 Specific Record Keeping and Reporting Requirements.....8

PART 1.0 FACILITY DESCRIPTION**1.3 Process Description of Modification**

This application requests to construct and install a second regenerative thermal oxidizer (RTO-2) and will handle the exhaust flow from all five ovens (OEE, OUU, OSS, OT-1 and OT-2). The two existing clearcoat booths will remain ducted to the existing RTO. To create redundancy and flexibility for production with the two oxidizers, Kia is requesting the ability to route the exhaust flow such that if RTO or RTO-2 becomes inoperable, the exhaust flowing to either oxidizer can be routed to the other. If RTO is inoperable, RTO-2 would collect exhaust from the five ovens as well as the two clear coat booths. If RTO-2 is inoperable, RTO would collect exhaust from the two clear coat booths as well as the five ovens.

Three existing ovens will also be modified by replacing or adding burners (OEE, OUU and OSS). Currently, the OEE has two 3.15 MMBtu per hour (hr) burners, four 1.6 MMBtu/hr burners and one 2.5 MMBtu/hr burner, for a total burner rating of 15.2 MMBtu/hr. This application proposes to replace one of the 3.15 MMBtu/hr burners with a 4.48 MMBtu/hr burner and add an additional 2.5 MMBtu/hr burner to OEE. This will increase the total burner rating for OEE from 15.2 MMBtu/hr to 19.03 MMBtu/hr and cause the total exhaust flow to increase from 11,301 cubic feet per minute (cfm) to 21,542 cfm. The OUU currently operates with one 2.5 MMBtu/hr burner, two 1.6 MMBTU/hr burners, and one 1.35 MMBtu/hr burners, for a total burner rating of 7.05 MMBtu/hr. This application proposes to replace the 1.35 MMBtu/hr burner with a 2.5 MMBtu/hr burner for OUU. This will increase the total burner rating for OUU from 7.05 MMBtu/hr to 8.2 MMBtu/hr and cause the exhaust fan flow to increase from 5,650 cfm to 8,299 cfm. This application proposes to replace the current 2.5 MMBtu/hr burner on the OSS with a 3.5 MMBtu/hr burner; this is a 1 MMBtu/hr increase in the total burner rating for OSS.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Modified Emission Units

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	ID No.	Description
E-Coat Operations				
EEE	E-Coat Main Dip (electrodeposition of waterborne primer coating)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63, Subpart IIII 40 CFR 60 Subpart MM	--	--
OEE	E-Coat Oven (direct fired)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input	RTO/ RTO2	Regenerative Thermal Oxidizers
Guide Coat (Primer) Operations				
BSS	Guide Coat (Primer) Spray Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII 40 CFR 60 Subpart MM	SPS1	Venturi Scrubber
OSS	Guide Coat (Primer) Oven (indirect fired)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input 40 CFR 63 Subpart DDDDD	RTO/ RTO2	Regenerative Thermal Oxidizers
Top Coat 1 Operations				
BT1B	Topcoat #1 Basecoat Spray Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII 40 CFR 60 Subpart MM	SBS1,	Venturi Scrubber
FT1	Topcoat #1 Flash Heater (indirect fired)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input 40 CFR 63 Subpart DDDDD	--	--
BT1C	Topcoat #1 Clearcoat Spray Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII 40 CFR 60 Subpart MM	SCS1 RTO/ RTO2	Venturi Scrubber Regenerative Thermal Oxidizers
OT1	Topcoat #1 Oven (indirect fired)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input 40 CFR 63 Subpart DDDDD	RTO/ RTO2	Regenerative Thermal Oxidizers
Top Coat 2 Operations				

Title V Permit Amendment

KIA Georgia, Inc.

Permit No.: 3711-285-0084-V-03-2

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	ID No.	Description
BT2B	Topcoat #2 Basecoat Spray Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII 40 CFR 60 Subpart MM	SBS2	Venturi Scrubber
FT2	Topcoat #2 Flash Heater (indirect fired)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input 40 CFR 63 Subpart DDDDD	--	--
BT2C	Topcoat #2 Clearcoat Spray Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII 40 CFR 60 Subpart MM	SCS2 RTO/ RTO2	Venturi Scrubber Regenerative Thermal Oxidizers
OT2	Topcoat #2 Oven (indirect fired)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input 40 CFR 63 Subpart DDDDD	RTO/ RTO2	Regenerative Thermal Oxidizers
Underbody Operations				
BUU	Underbody Sealer Booth	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(t) PM BACT limit of 0.0015 gr/dscf 40 CFR 63 Subpart IIII	FUB1	Dry Filter
OUU	Underbody Sealer Oven (direct fired)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g) NO _x BACT limit of 0.09 lb/MMBtu heat input	RTO/ RTO2	Regenerative Thermal Oxidizers

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

* **Modified or new units are in bold.**

3.2 Equipment Emission Caps and Operating Limits

Best Available Control Technology – Emission Limits – 52.21

Modified Condition

3.2.2 The VOC destruction efficiency of the regenerative thermal oxidizers (RTO and RTO2) shall be no less than 95% at all times that E-Coat Oven (OEE), Guide Coat (Primer) Oven (OSS), Topcoat Clearcoat Spray Booths (BT1C and BT2C), Top Coat Ovens (OT1 and OT2), or Underbody Sealer oven (OUU) are in operation. VOC emissions from the following operations shall be captured and controlled by either RTO or RTO2:
[40 CFR 52.21 – PSD)]

Table 3.2.2-1

Unit ID	Unit Description
OEE	E-coat Oven
OSS	Guide Coat (Primer) Oven
BT1C	Topcoat #1 Clearcoat Spray Booth
BT2C	Topcoat #2 Clearcoat Spray Booth

OT1	Topcoat Oven 1
OT2	Topcoat Oven 2
OUU	Underbody Sealer Oven

3.3 Equipment Federal Rule Standards

40 CFR 63 Subpart IIII: NESHAP: Surface Coating of Automobiles and Light-Duty Trucks

MODIFIED CONDITION

3.3.4 The Permittee shall meet the operating limits applicable to the regenerative thermal oxidizers (RTO and RTO2) and the associated capture systems by controlling the organic HAP emissions from the affected source as defined in Condition 3.3.1. The Permittee shall establish the operating limits during the most recent performance tests per 40 CFR 63.3167. The Permittee shall meet these operating limits at all times during coating operations on and after the establishment of these limits.

[40 CFR 63.3093(b), 63.3168(a) and Table 1 to 40 CFR 63, Subpart IIII]

- a. The average combustion temperature of RTO and RTO2, each, in any 3-hour period shall not fall below that established during the most recent Division-approved performance test, as monitored per Condition 5.2.1. The temperature shall be monitored while the specified regenerative thermal oxidizer (RTO or RTO2) is being operated.
- b. For each associated capture system that is a permanent total enclosure (PTE):
 - i. The air flow at all times shall flow into the enclosure; and either
 - ii. The average facial velocity of air through all natural draft openings in the enclosure shall be at least 200 feet per minute; or
 - iii. The pressure drop across the enclosure shall be at least 0.007 inch water column.
- c. For each associated capture system that is not a PTE, the average gas volumetric flow rate or duct static pressure in each duct between a capture device and the RTO/RTO2 inlets in any 3-hour period shall not fall below the average volumetric flow rate or duct static pressure established for that capture device during the most recent Division-approved performance test.

PART 4.0 REQUIREMENTS FOR TESTING**4.2 Specific Testing Requirements****NEW CONDITION**

- 4.2.4 Within 180 days of the initial startup of regenerative thermal oxidizer RTO2, the Permittee shall conduct performance testing to determine the VOC destruction efficiency of regenerative thermal oxidizer RTO2 and demonstrate compliance with the VOC BACT limit specified in Condition 3.2.2 and the emission standard specified in Condition 3.3.1. The performance test shall demonstrate compliance with the above emission limits, and establish the operating limits required by Condition 3.3.4 per 40 CFR 63.3093. The performance test shall be conducted when all five ovens (OEE, OUU, OSS, OT-1 and OT-2) and two clearcoat spray booths (BT1C and BT2C) are routed to regenerative thermal oxidizer RTO2. The Permittee shall conduct subsequent performance tests on regenerative thermal oxidizer RTO2 to determine the VOC destruction efficiency at a frequency of at least once every 60 months. During the test(s), the combustion chamber temperature shall be monitored and recorded using the equipment required in Condition 5.2.1, and the records submitted along with test results.
[391-3-1-.02(3)(a)]

NEW CONDITION

- 4.2.5 Pursuant to Condition 4.2.4, within 180 days of the initial startup of RTO2, the Permittee shall conduct performance testing to determine the capture efficiency of each capture system exhausting to regenerative thermal oxidizer RTO2. Capture efficiency testing shall be conducted in accordance with the procedures specified in 40 CFR 63.3165. The Permittee shall conduct subsequent performance tests to determine the capture efficiency of each capture system exhausting to RTO2 at a frequency of at least once every 60 months. During the test(s), the Permittee shall monitor and record either the gas volumetric flow rate or duct static pressure in each individual capture system prior to merging (manifolding) of ductwork using the devices required in Condition 5.2.2 and submit the records along with the test results.
[391-3-1-.02(3)(a)]

NEW CONDITION

- 4.2.6 Within 180 days of the initial startup of RTO2, the Permittee shall conduct a NOx performance test on at least one of the ovens (OEE, OSS, and OUU) to demonstrate compliance with the NOx BACT limit specified in Condition 3.2.10.
[391-3-1-.02(3)(a)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)**5.2 Specific Monitoring Requirements**40 CFR 63, Subpart IIII**MODIFIED CONDITION**

5.2.1 The Permittee shall install, calibrate and maintain and operate continuous parameter monitoring systems (CPMS) to continuously monitor and record the gas/combustion temperature of the regenerative thermal oxidizers (RTO and RTO2). The temperature shall be monitored while the specified regenerative thermal oxidizer (RTO or RTO2) is being operated. In doing so, the Permittee shall comply with the following requirements for the combustion temperature CPMS:
[40 CFR 63.3168(c)]

- a. Install the gas temperature monitor/CPMS in the firebox of the regenerative thermal oxidizers (RTO and RTO2) or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.
- b. Meet the following requirements:
 - i. Locate the gas temperature sensor in a position that provides a representative temperature.
 - ii. Use a temperature sensor with a measurement sensitivity of 4°F or 0.75% of the temperature value, whichever is larger.
 - iii. Shield the temperature sensor system from electromagnetic interference and chemical contaminants.
 - iv. If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20°F.
 - v. Perform an electronic calibration at least semiannually according to the manufacturer's owners manual, and then conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30°F of the process temperature sensor reading
 - vi. Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.
 - vii. At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.

MODIFIED CONDITION

5.2.2 The Permittee shall install, calibrate, maintain, and operate CPMS to continuously monitor and record the operating parameters of each capture system feeding the regenerative thermal oxidizers (RTO and RTO2) in accordance with and allowed by Table 1 to 40 CFR 63 Subpart IIII. For the clearcoat spray booths, the duct pressure or airflow rate shall be monitored on the RTO duct at a point downstream of the split to re-circulate the air. In doing so, the Permittee shall comply with the following requirements for the CPMS involved:
[40 CFR 63.3168(g)]

- a. For each CPMS measuring gas flow, the Permittee shall meet the following requirements:
 - i. Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.
 - ii. Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
 - iii. Conduct a flow sensor calibration check at least semiannually.
 - iv. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

- b. For each CPMS measuring pressure drop, the Permittee shall meet the following requirements:
 - i. Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure drop across each opening that is being monitored.
 - ii. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
 - iii. Check pressure tap pluggage daily.
 - iv. Using an inclined manometer with a measurement sensitivity of 0.0002 inch water column, check gauge calibration quarterly and transducer calibration monthly.
 - v. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum, operating pressure range or install a new pressure sensor.
 - vi. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS**6.1 General Record Keeping and Reporting Requirements**

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(iii), 40 CFR 60.48c, 40 CFR 60.395, 40 CFR 63.3130]

- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

MODIFIED CONDITION

- i. Any three-hour block period during which the average gas stream/combustion temperature of the RTO, while RTO is being used to control emissions, is lower than the temperature established during the most recent Division approved performance test at which destruction efficiency was determined minus the accuracy tolerance for the temperature,

NEW CONDITION

- vii. Any three-hour block period during which the average gas stream/combustion temperature of regenerative thermal oxidizer RTO2, while RTO2 is being used to control emissions, is lower than the temperature established during the most recent Division approved performance test at which destruction efficiency was determined minus the accuracy tolerance for the temperature.

6.2 Specific Record Keeping and Reporting Requirements

40 CFR 60, Subpart MM & Georgia Rule (t) Record Keeping, Compliance Demonstration & Reporting Requirements

Compliance Demonstration Requirements for Georgia Rule (t)**MODIFIED CONDITION**

6.2.4 The Permittee shall demonstrate compliance with the VOC emission limits in Condition 3.4.6 (Georgia Rule (t)) using the appropriate material usage, VOC content and production records in Conditions 6.2.1 and 6.2.2. The Permittee shall use the applicable equations and/or approaches in this condition to calculate the daily or monthly average emissions or to determine the VOC emissions from the operations involved:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

- a. For VOC emissions from the E-coat operation:

$$E_{EDP} = \frac{\sum_{i=0}^n \{ (C_{EDP,i})(V_{EDP,i}) \} (1 - R_{EDP})}{\sum_{i=0}^n (V_{EDP,i})} \quad \text{Equation 6.2.4-1}$$

Where:

E_{EDP} : The monthly weighted average of VOC emissions from the EDP/electrophoretic applied prime operation/coating tank, pounds of VOC per gallon of coating excluding water;

$C_{EDP,i}$: VOC content of the prime coating solution in the coating tank after the i^{th} addition of EDP/electrophoretic coating solution to the EDP coating tank during the month ($C_{EDP,0}$ designates to the VOC content of the coating solution in the EDP coating tank at the beginning of the month), pounds of VOC per gallon of the coating solution;

$C_{EDP,i}$ shall be determined using the following equation:

$$C_{EDP,i} = \frac{[(C_{EDP,i-1})(V_{EDP,i-1})] + (C_{EDP,add,i})(V_{EDP,add,i})}{(V_{EDP,i-1}) + (V_{EDP,add,i})}$$

Where $C_{EDP,i-1}$ and $V_{EDP,i-1}$ represent respectively the VOC content and volume of the coating solution (excluding water) inside the EDP coating tank before the i^{th} addition of the coating solution. $C_{EDP,add,i}$ and $V_{EDP,add,i}$ represent respectively the VOC content and volume of i^{th} addition of the coating solution to the EDP coating tank.

$V_{EDP,i}$: Gallons of the coating solution in the coating tank excluding water after the i^{th} addition of the EDP/electrophoretic coating solution to the EDP coating tank during the month ($V_{EDP,0}$ designates to the total volume the EDP/electrophoretic solution inside the EDP coating tank at the beginning of the month), which shall be determined below:

$$V_{EDP,i} = V_{EDP,i-1} + V_{EDP,add,i}$$

R_{EDP} : Overall control efficiency of the capture system and RTO/RTO2 serving the E-coat tank and curing oven. R_{EDP} shall be assumed zero when the 3-hour average RTO or RTO2 temperature is less than that established during the most recent performance test unless otherwise specified by the Division.

- b. For VOC emissions from each spray prime, topcoat and final repair operation that demonstrates compliance via a daily weighted average:

$$E_{VOC} = \frac{\sum_{j=1}^m \{ (C_{coating VOC, j}) (V_{coating, j}) (1 - R_{voc, j}) \}}{\sum_{j=1}^m (V_{coating solids, j})}$$

Equation 6.2.4-2

Where:

E_{VOC} : The daily weighted average VOC emissions from each spray prime, topcoat or final repair operation involved, pounds of VOC per gallon of applied coating solids for spray prime and topcoat operation or pounds of VOC per gallon of coating solids sprayed for final repair operation;

$C_{coating VOC, j}$ VOC content of the j^{th} spray prime, topcoat or final repair coating used by each spray prime, topcoat or final repair operation involved during the day, pounds of VOC per gallon of the coating;

$V_{coating, j}$ Volume of the j^{th} spray prime, topcoat or final repair coating used by each spray prime, topcoat or final repair operation involved during the day, gallons;

$R_{voc, j}$: Overall efficiency of the VOC control system controlling the VOC emissions from the j^{th} spray prime, topcoat or final repair coating used by the spray prime, topcoat or final repair operation involved during the R_{EDP} shall be assumed zero when the 3-hour average RTO or RTO2 temperature is less than that established during the most recent performance test unless otherwise specified by the Division.

$V_{coating solids, j}$ Total volume of the applied coating solids (coating solids that were deposited on the surface being coated) for the j^{th} spray prime and topcoat respectively, or total volume of the coating solids sprayed for the j^{th} spray final repair coatings, as used by each spray prime, topcoat or final repair operation involved during the day, gallons.

The Permittee may use the applicable coating transfer efficiencies in Condition 6.2.7 to determine the applied coating solids.

- c. For VOC emissions from the use of sealer, adhesive, body glass edge cleaner, pre-priming cleaner, primer to bond glass or to the body to prepare the glass and body for bonding, adhesive to bond body glass to the body, coatings used in final repair operation(s) that does not involve in daily average, and all other materials subject to Condition 3.4.6., the Permittee shall use results of EPA Method 24 tests, MSDS, PDS, manufacturer's formulation data and/or technical bulletin MSDS sheets, formulation data, and/or other product and/or production information, as required by Condition 6.2.1 and approved by the Division, to demonstrate that the VOC content of each of the materials involved is equal to or below the corresponding limit in Condition 3.4.6.

The Permittee shall notify the Division in writing if any of the VOC emissions exceeds the applicable limit in Condition 3.4.6. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the emission limit involved.

Compliance Demonstration Requirements for 40 CFR 60, Subpart MM

MODIFIED CONDITION

6.2.7 The Permittee shall demonstrate compliance with the VOC emission limits in Conditions 3.3.8, 3.3.9 and 3.3.10 using the appropriate material usage, VOC content and production records in Condition 6.2.1, and follow the procedures specified below to determine the volume weighted average of the total mass of VOC per volume of coating solids used each calendar month:
[391-3-1-.02(6)(b)1; 40 CFR 60.393; and 40 CFR 70.6(a)(3)(iii)]

- a. Calculate the mass of VOC used during the calendar month for each EDP/electrophoretic applied prime coat, non-EDP prime coat, guide coat and/or topcoat operation:

$$M_o + M_d = \sum_{i=1}^n (L_{ci} D_{ci} W_{ci}) + \sum_{j=1}^m (L_{dj} D_{dj} W_{dj}) \quad \text{Equation 6.2.7-1}$$

Where:

M_o : Total mass of VOC in coatings (EDP prime coat, non-EDP prime coat, guide coat and/or topcoat) as received, kilogram (kg);

M_d : Total mass of VOC in dilution solvent, kg;

L_{ci} : Volume of coating i consumed, as received, liters;

D_{ci} : Density of coating i as received, kilogram (kg) per liter;

W_{ci} : Mass ratio/fraction of VOC in coating i as received; kg of VOC per kg of coating i;

L_{dj} : Volume of each type VOC dilution solvent (j) added to the coatings, as received, liters;

D_{dj} : Density of each type VOC dilution solvent j added to the coatings, as received, kg per liter;

W_{dj} : Mass ratio/fraction of VOC in each type VOC dilution solvent (j), added to the coatings, as received; kg of VOC per kg of the solvent.

- b. Calculate the total volume of coating solids used during the calendar month for each EDP/electrophoretic applied prime coat, non-EDP prime coat, guide coat and/or topcoat operation:

$$L_s = \sum_{i=1}^n (L_{ci} V_{si}) \quad \text{Equation 6.2.7-2}$$

Where:

L_s : Volume of solids in coatings consumed, liters;

n : Total number of coatings used;

L_{ci} : Volume of coating i consumed, as received, liters;

V_{si} : Volume ratio/fraction of solids in coating i, as received, liter of coating solids per liter of coating i;

- c. Select the appropriate transfer efficiency (T) from the following tables for each surface operation:

Table 6.2.7-1: Overall Transfer Efficiency of the Coating Operations Using Total Purge Material Capture

Application Method	Transfer Efficiency, Mass Fraction
Air Atomized Spray (Waterborne Coating)	0.39
Air Atomized Spray (Solvent-borne Coating)	0.50
Manual Electrostatic Spray	0.75
Automatic Electrostatic Spray	0.95
Electrodeposition (EDP)/Electrophoretic Applied Prime	1.00

Table 6.2.7-2: Overall Transfer Efficiency of the Coating Operations Not Collecting Any Purge Material After Purging

Application Method	Transfer Efficiency, Mass Fraction
Air Atomized Spray (Waterborne Coating)	0.30
Air Atomized Spray (Solvent-borne Coating)	0.40
Manual Electrostatic Spray	0.62
Automatic Electrostatic Spray	0.95

If the Permittee can justify to the Division's satisfaction that other values for the transfer efficiencies are appropriate, the Division will approve their use on a case-by-case basis.

When more than one application method (I) is used on an individual surface coating operation, the Permittee shall use the follow to determine an average transfer efficiency (T) for the operation:

$$T = \frac{\sum_{i=1}^n (T_l V_{si} L_{cil})}{\sum_{l=1}^p (L_s)}$$

Where:

T_l : Transfer efficiency of the application method (l);

V_{si} : Fraction/proportion of coating solids by volume in each coating (i) as received;

L_{cil} : Volume of each coating (i) consumed by each application method (l), as received, liters;

L_s : Volume of coating solids consumed, liters;

- d. Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) during each calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s T} \quad \text{Equation 6.2.7-3}$$

- e. Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) emitted after RTO/RTO2 for each affected facility/coating operation by the following equation:

$$N = G(1 - R_{voc}) \quad \text{Equation 6.2.7-4}$$

Where:

N : The post-control volume weighted monthly average VOC emissions rate for the affected facility/coating operation, pounds of VOC per gallon of coating solids as applied after the control;

R_{voc} : Overall control efficiency of the capture system and RTO/RTO2. R_{voc} shall be assumed zero when the 3-hour average RTO or RTO2 temperature is less than that established during the most recent performance test unless otherwise specified by the Division.

If the G or N as calculated monthly for a specific affected facility/coating operation is less than the applicable emission standard in Conditions 3.3.8, 3.3.9 or 3.3.10, the source is in compliance.

Reporting Requirements for 40 CFR 60, Subpart MM**MODIFIED CONDITION**

- 6.2.8 The Permittee shall submit the following reports:
[391-3-1-.02(6)(b)1; 40 CFR 60.395; and 40 CFR 70.6(a)(3)(iii)]
- a. The Permittee shall submit an initial compliance report including the following information:
 - i. The volume weighted average mass of VOC per volume of applied coating solids for each coating operation subject to 40 CFR 60 Subpart MM (e-coat, guide coat and topcoat);
 - ii. The total mass of VOC per volume of applied coating solids before and after RTO/RTO2
 - iii. Efficiency of each VOC capture system feeding RTO and RTO2;
 - iv. Destruction of RTO and RTO2 used to attain the compliance with the applicable emission limit(s);
 - v. A description of the method used to establish the fraction of VOC captured and sent to RTO/RTO2.
 - b. The Permittee shall submit quarterly reports of any exceedance of the limits of Conditions 3.3.8, 3.3.9 or 3.3.10, within 30 days of the end of each calendar quarter. If no exceedances occur, the Permittee shall indicate such in the report in accordance with Condition 6.1.7.

Compliance Demonstration Requirements for BACT Emission Limits**MODIFIED CONDITION**

- 6.2.43 The Permittee shall use the records required in Condition 6.2.1, the methods described in Condition 6.2.7, and the actual RTO/RTO2 destruction efficiency (as applicable), capture efficiencies (as applicable) and paint spray transfer efficiencies (as applicable) determined from the most recent performance tests to calculate the monthly average VOC emission rates from the each of the following operations, in the units specified in Conditions 3.2.3 through 3.2.9. All calculations shall be part of this record and shall be available upon request.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

Table 6.2.43-1

Surface Coating Operation	Unit ID
E-coat Main Dip	EEE
E-Coat Oven	OEE
Guide Coat (Primer) Booth	BSS
Guide Coat (Primer) Oven	OSS
Top Coat 1 Basecoat Booth	BT1B
Top Coat 2 Basecoat Booth	BT2B

Title V Permit Amendment

KIA Georgia, Inc.

Permit No.: 3711-285-0084-V-03-2

Top Coat 1 Clearcoat Booth	BT1C
Top Coat 2 Clearcoat Booth	BT2C
Top Coat 1 Oven	OT1
Top Coat 2 Oven	OT2
Underbody Sealer Booth	BUU
Underbody Sealer Oven	OUU
Wax Booth	BWF

For the purpose of this condition, the Permittee shall assume zero efficiency for any VOC emission capture system for the RTO or RTO2 for any period of time a deviation from the applicable operating limit of Condition 3.3.4 occurs, unless other data is available indicating the actual efficiency of RTO/RTO2 and the use of these data is approved by the Division.

Compliance Demonstration and Record Keeping Requirements for Plantwide VOC Limit

MODIFIED CONDITION

- 6.2.45 The Permittee shall maintain monthly usage records of all VOC containing materials for the entire facility. These records shall include all the information required for the calculation of the monthly plant-wide VOC emissions, such as the total weight of each VOC material used/processed and/or containerized VOC wastes disposed off-site, the VOC content of each VOC material and/or containerized VOC wastes disposed off-site (expressed as a weight percentage), the operation hours of the VOC control system(s), the overall VOC control efficiency of the VOC control system(s) approved by the Division, and periods during which the combustion chamber temperature of RTO or RTO2 is less than the excursion temperature defined by Condition 6.1.7.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

